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THE NEW STAR IN AURIGA.

ON Feb. 2 of the present year Professor Copeland of the Edinburgh Observatory received an anonymous postal card upon which was written the following: "Nora in Auriga, in Milky Way, about two degrees south of Chi Aurigæ, preceding 26 Aurigæ; fifth magnitude, slightly brighter than Chi,"

In No. 1,164 of *Nature* the discoverer of the new star establishes his identity by a short notice of the manner in which he found the Nora. His name is Thomas D. Anderson, and he lives in Edinburgh, Scotland. The following is an abbreviation of his statement: —

"It (the star) was visible as a star of the fifth magnitude for two or three days, very probably even for a week, before Professor Copeland received my postal card. I am almost certain that at two o'clock on the morning of Sunday, January 24, I saw a fifth magnitude star making a large obtuse angle with Beta Tauri and Chi Aurigæ, and I am positive that I saw it at least twice subsequently during that week. Unfortunately, I mistook it on each occasion for 26 Aurigæ, merely remarking to myself that 26 was a much brighter star than I used to think it. It was only on the morning of Sunday, the 31st of January, that I satisfied myself that it was a strange body."

Mr. Anderson then, in a frank manner, speaks of his knowledge of astronomy and the instrumental means at his disposal. Of the former he says, it is of meagrest description, while the latter consist of a pocket telescope and a copy of Klein's "Star Atlas."

Since discovery the new star has been very generally observed at all the prominent observatories in Europe and America. The telegram announcing the discovery was received at the Naval Observatory on the afternoon of February 6. I observed the star the same evening with our 4-inch comet-seeker. To me it then appeared about half a magnitude brighter than Chi, and was of a dark straw color. Using a low-power eye-piece, I could bring both Chi and the new star into the field at the same time. With the meridian transit I observed the star for its Right Ascension, and Professor Frisby, with the 9-inch equatorial, determined its declination. The large transit circle is now dismounted, undergoing repairs prior to its removal to the new Observatory. The place of the star for 1892.0 is, R.A. 5 h. 25 m. 3.4 s.; Dec. $+30°\ 21'\ 41.0''$. The magnitude was 4.6.

Professor Copeland, upon examining the star with a prism between the eye and the eye-piece of the 24 inch reflector, observed that it seemed to possess a spectrum very much like that of the Nora of 1886, the recognized variable, named Tau Coronæ.

The star was photographed at Harvard College Observatory on Dec. 1, 10, and 20, two months before it was known to be a new star. This came about by Prosessor Pickering and his assistants photographing the region of the sky in which the Nora is located in the course of the photographic mapping of the stars and their spectra now being carried on at Harvard College Observatory. On the 1st of December, 1891, the Nora was faint, on December 10 bright, and on the 20th maximum. Spectrum unique. The above is a statement given out by Professor Pickering.

From No. 3,076 of the *Astronomische Nachrichten* we glean the following interesting points relative to the new star. At Bonn, Feb. 2, Professor Kustner made a careful comparison of the magnitude of the Nora with three neighboring stars. He estimated it as half a magnitude fainter than Chi, little, if any, brighter than 14 Aurigæ, and decidedly brighter than 26 Aurigæ, the resulting magnitude being 5.5.

The region of the sky in which the new star is located was examined for the Bonn Durchmusterung by Schonfeld, March 26, 1856, and Kreuger, Feb. 16, 1857; also again by Kreuger in the revision-zone, March 23, 1858, on which date he observed a star of the 9.5 magnitude distant from the place of the new star 2.5s. and 0.8′. This faint star has, however, been observed anew at Bonn and Hamburg.

At Upsala on Feb. 2 its magnitude was estimated as 5.5, and its color as yellow. On observing its spectrum a very bright line was seen at the red end, and another in the blue-green. On Feb. 3 the star was almost as bright as Chi, but the next night it was fainter.

At Kiel, Mr. Kroeger observed the spectrum on Feb. 2. It was brilliant and visible throughout all the colors from the red far into the violet. A broad, black band was seen near C. In the red and orange there were three groups of lines, separated by equal intervals and of nearly equal width and intensity, all wide, but faint.

Mr. Yendell, living near Boston and an expert in variable star observing, is authority for the statement that between Feb. 9 and 22 the star appeared to him of a bluish white color with no tinge of red. This observation of the color of the star is directly opposite to that reported by the English and German observers, and also that of mine made on several occasions. The star has each time that I have observed it, ten or twelve times, always appeared to me of a dark straw color. I have observed it with two instruments, the 4 inch comet-seeker and the meridian transit. Mr. Lockyer, the English spectroscopist, has secured several photographs of the spectrum. He estimated the color of the star as reddish with a purple tinge. Mr. Fowler, one of his assistants, estimates it as reddish yellow; while another, Mr. Baxaudall, estimates it as purplish.

Mr. Lockyer, commenting upon the photographs taken on Feb. 7, says, "The bright lines *K*, *H*, *h*, and *G* are accom-